

They have no numbers, and they do not use the Arabic 802 numbers. They prefer to make holes in the sand, and by this rather long process succeed in figuring just the same. A Tuareg, moreover, cannot talk for five minutes without emphasizing his recitation with dots or lines on the sand. If he is asked, "How many days' march are there between this point and that one," he cannot answer any number without marking on the ground as many dots as there are days in his answer.

A Tuareg who has been made to sit on the ground on a [516] blanket, before he begins to talk raises the edges of the [521] blanket /44/ so as to indulge in his favorite occupation. Certainly if he were transported to France, into a well-waxed apartment, he would be very unhappy and would quickly ask for sand or earth so as to be able to draw his dots and lines.

But this custom has its use when one wishes to have an 487 idea of the road one must travel. The Tuareg who, like all 823 nomads, has a very accurate sense of direction, will draw an over-all map of the route to be followed, with the wadis and landmarks which would be met.

The Tuareg do not have words in their language to denote 177 the days of the week. Those that they use have been borrowed 192 from the Arabic and changed. 805

On the other hand, for their months they have kept some truly Tamashek names, while others are definitely taken from the Arabic. Thus:

1. "Tamessedek," corresponding to Muharram and which seems to be derived from the Arabic "sedeq" صدق "to give alms." It is said that this name means "zekkat" زكاة, or "legal alms."

2. "Talilt tassettafer" (corresponding to Safar). This 773 means "the black month." Here is why this month is so 776 called: "Sidna Slimane (Solomon) was in command of the 805 genii and demons. One day when he was standing leaning on his cane, the "djinn" (genii) told a termite to eat out the bottom of the cane. The termite did the job so well that the

cane broke at the bottom, and poor Solomon fell over, all fours in the air, and was killed in his fall. His death was the signal of liberty for the genii and demons, who spread throughout the world, precisely in that month which was later called, the "black month."

3. "Talilt tarer'ert," that is, the "yellow month," (corresponding to Rabia I, or Mouloud, the month of the Prophet's birth), so called, it is said, because it is lighted, نور by the birth of the Prophet. /45/

4. "Aouhim oua izzaren," that is, "the first Aouhim," (corresponding to Rabia II). Aouhim means "fawn of a gazelle." This is also the name of a star.

5. "Aouhim oua ilkamen," that is, "the next Aouhim," (corresponding to Jumada I).

6. "Sarat" (corresponding to Jumada II). The Tuareg have been unable to give me any explanation of this name.

7. "Tin tineslimine," that is, "the month of the marabouts," (corresponding to Rajab). In the time of the Kharijite doctrine, the Ramadan was put back to the month Rajab, and it is known that the Tuareg espoused this doctrine (1).

1. See Essai sur l'Histoire de l'Islamisme /Essay on the History of Islamism/ by Dozy.

8. "Amezzehel," that is "he who runs," (from the root "zehel," to run), thus named because it has only 29 days and it precedes the arrival of Ramadan. It corresponds to Shaban.

9. "Azzoum," that is, "the fast" (corresponding to the month of Ramadan), a name taken from the Arabic word الصوم "essoum," the fast.

10. "Tessessi," that is, "act of drinking" or "libations," because one may drink after the fast. It corresponds to Shawwal, the month in which the feast called "Aïd Ser'ir" takes place.

11. "Djer mouhaden," that is, "between prayers," because it comes between the feasts. It corresponds to Zu'lkadah. 805

12. "Tafaski," that is, "the sacrifice." It corresponds to Zu'lhijjah, in which the feast called "Aïd el Kebir," also [177] called by the Arabs "Aïd el Adha" عيد الأضحية, or "feast of sacrifices," takes place.

There is no book in Tamashek, at least that is what was told me. However, the secretary of the amenokal Moussa /46/ ag Amastane informed me that there was, at the Ahaggar, a book written in the Tamashek language, but with Arabic characters, which was the translation of a work on law of which Ibn Achir was the author (1). 177 212

1. This book is at present in the possession of someone called Salakh ag Meguemmed of the Isoqqamaren. /47/

Part Two

The Tuareg in their Public Life

Chapter I

Nobles and Imr'ad

Duveyrier has described so well the characteristics which distinguish a noble from an amr'id (1) that I think it 114 565

1. Les Touareg du Nord /The Northern Tuareg/, pages 331 to 335.

paratively rich vegetation of Air contains species found also in Ahaggar, but Ahaggar has Mediterranean plants including several saline species which do not thrive in Air, where there are tropical or Sudanese species unknown to Ahaggar. [37]

Botanically Air is very closely connected with the Sudan, and the mountain massif is within the Sudanese zone of summer rain. It is true that rain at the northern outskirts of Air occasionally falls in winter and may then give rise to scattered pasture of annual plants, but these rains are of no real importance. The important rainfalls of Air occur in the period June-September, and particularly in July and August. As may be gathered from the description of botanical conditions, Air has a much bigger annual precipitation than has Ahaggar. Thus the village of Ifrouan in Northern Air has 74 mm, while Agadez at the southern slopes of the massif has 179 mm. Precipitation will of course vary from one year to the other, but rain will always fall sufficiently for the spring of annual plants. This is the reason for a type of stock-breeding different from that of Ahaggar. In Air the Tuareg are richer in camels, they do not possess so many goats but are very rich in sheep, and most of them have zebu. [132] [137] [233]

The climatic and botanical differences of Air and Ahaggar can be seen more directly from the division of the year into seasons (fig. 2). Air has a summer and a winter season between which there are two seasons termed *akasa* and *jarat*. These two words as seasonal terms express the fact that rain and annual pastures in Air are recurrent events, as the word *akasa* literally means "green annual plants", and the word *jarat* refers to "dry annual plants". Both words are known also to the Ahaggar Tuareg but are by them not applied as seasonal terms, for in their country rain will not occur every year and may fall at most seasons. [132] 805

Conditions for stock-breeding are very much better in Air than in Ahaggar, but the latter country has a few superior qualities:— 1) Part of the year Ahaggar has a comparatively cool climate which is said to have a positive influence on the lactation of domestic animals. 2) In Ahaggar all over the country there are saline pastures which play an important part in stock-breeding — not because these plants are very nourishing but the animals do not thrive without salt. In Air saline plants are very rare and found mainly to the south and south-west of the massif where water and soil also contain salt. Many pastoralists will migrate to these regions shortly after the rains, while people who do not undertake such migrations feed their domestic animals with salt. Camels and cows have a particular need for fodder with a salt content. 3) Ahaggar has richer wells and a greater number of permanent ponds than Air. This may seem rather peculiar as precipitation is much bigger in the south than in the north. In Ahaggar and Tassili-n-Ajjer some ponds may contain fish apparently unknown in Air. In the latter country there are a great many ponds or even small lakes during the rains but they dry out very quickly when rainfall ceases. Water in Air most of the year is drawn from wells many of which go dry during the hot season; this will frequently lead to quarrels between nomads. [233] [132] [137] [135] [137] [221] [312] [136] [578]

Spring of certain
perennial plants.

Very hot.
All pastures dry.
Normal season of defoliation
of acacias.
Wells go dry.
Dry annual plants form the
best pastures.

Beginning of the rains.

Rainy season.
Spring of annual plants.
Temperature decreases owing
to the rains.
Water abundant in ponds.
People suffer from malaria.

Rainfall stops.
Most annual plants are
drying and ponds go dry.
Increase of temperature and
very hot winds in daytime,
while nights are cool.

Cool season begins.
Frost may occur during night,
while snow is said never to fall.
Acacias are green and form
good pasture together with
dry annual plants.

Spring of certain perennial
plants.
Considered neither hot nor cold.

Very hot.
Pastures of all perennial and
annual grasses and herbs
are dry.
Acacias are green and form
the best pastures.
Rain maximum - if rainfall
occurs.
Spring of annual plants
after rain.

Neither hot nor cold.
Pastures of green annual plants
in case of rainfall.

Annual pastures become dry.

Normal season of defoliation
of acacias.
Dry annual plants form the
best pastures.
Frost is very common during
night, and snow may fall in
the mountains.
All winter people suffer much
from colds, and deaths owing
to pneumonia or similar
diseases are not uncommon at
the end of the winter season.

FEB. MAR. APR. MAY JUNE JULY AUG. SEP. OCT. NOV. DEC. JAN. FEB. MAR.
TASIT AOUELEN TESOUAK AKASA-IL. AIR TUAREG NARAT TIGEREST

FEB. MAR. APR. MAY JUNE JULY AUG. SEP. OCT. NOV. DEC. JAN. FEB. MAR.
TASIT AOUELEN AHAGGAR TUAREG ANEQUAN TAGREST

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Fig. a.-Division of the year into seasons among the Tuareg of Air and Ahaggar. Climatic and botanical characteristics are indicated. (The proper spelling of *tagrest* (tigerest) is *tagerest*, (tigerest) while *narat* should be written *farat*).

Vegetation

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The climatic and botanical differences between Ayr and Ahaggar can be seen directly from Tuareg division of the year into four seasons each having a duration of about three months. Ayr has a summer season and a winter season between which there are two seasons termed *akasa* (sometimes also called *el*, or *éqasit*) and *farat*. These two words as seasonal terms indicate that rain and annual vegetation in Ayr are recurrent events. For the word *akasa* literally means "green annual plants" while the word *farat* refers to "dry annual plants". The season *farat*, most of which is extremely dry, is followed by the winter season *tagrest* where rain does not fall, though the northern outskirts of Ayr sometimes have a little rain at this season. The transitional period between winter and summer known as *tabait* is not considered a main season, but it is frequently mentioned by the Tuareg because certain perennial plants germinate at that time of the year. The summer season *éwilén* is extremely hot and rainless. It is the season of defoliation for acacias and various other perennial plants which change their leaves - generally in the way that they do not lose all leaves at one and the same time. Therefore, even in summer most acacias have some green leaves, though in certain places where rain has not fallen abundantly acacias may lose all their leaves in summer. In certain unfavourable regions outside of the Ayr Massif, acacias may even be without green leaves for a few years, but such trees become verdant again with heavy rainfalls. Scattered barren acacias are found mainly to the north of the Massif. The Tuareg say that acacias can survive an extremely long period of drought during which they are entirely dry. But they normally become green again when rainfalls start. The beginning of the rains is known to the Ayr Tuareg as *t'ézewek*.

In Ahaggar the Tuareg reckon with a summer season named *éwilén* and a winter season called *tagrest*. These two seasons are separated by the autumn known as *amewan* and the spring termed *tafsit*. The Ahaggar Tuareg know the words *akasa* and *farat*, but do not employ them for seasonal terms because rain and annual pasture do not recur annually in their country. The summer season *éwilén* is extremely hot, but it is not the proper season of defoliation for acacias, which under favourable conditions are green in summer and defoliate in winter. The autumn *amewan* which follows upon the summer is characterized by less hot temperatures and gradually changes into *tagrest* (winter) when frost is extremely common during night, and snow falls in the mountains. This cold winter season is followed by the spring *tafsit* when many perennial plants germinate.

As will be seen from this description of the year in Ayr and Ahaggar these two countries differ much in regard to climate and plant development. Within each of the two areas there are climatic and botanical zones which are very different.

The Ahaggar Mountains, according to Maire, fall into three distinct zones of vegetation:— 1) A Tropical Zone up to 1700-1800 metres above sea level. 2) A Lower Mediterranean Zone between 1800 and 2300-2400 metres above sea level. 3) An Upper Mediterranean Zone from about 2400 metres up to 2918 metres which is the extreme altitude of Ahaggar (cf. Maire 1933 & 1940; Lhote 1955, p. 41 f.). This division of the Ahaggar Mountains into zones of vegetation by a learned botanist seems to correspond largely with the division of the mountains into three distinct zones by the Tuareg. These three Tuareg zones and their characteristic perennial plants are the following:—

1) *Abada*, the lower parts of Ahaggar where perennial plants are abundant along the broad river valleys. Trees are very important the main species being various acacias (*abser*, *Acacia Raddiana* &

[text continues on p. 31]

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PWSFig. 14. Division of the year into seasons among the Tuareg of Ayr and Ahaggar. Climatic and botanical characteristics are indicated. The *deux* season is also known to the Ayr Tuareg as *di* and *drofi*.

Spring of certain perennial plants.
The fruit-pods of *samat* (*Acacia farnes*) and *agar* (*Maerua crassifolia*) fall to the ground.

Very hot. Most pastures dry.
Normal season of defoliation of acacias. Wells go dry. Dry annual plants form the best pastures.

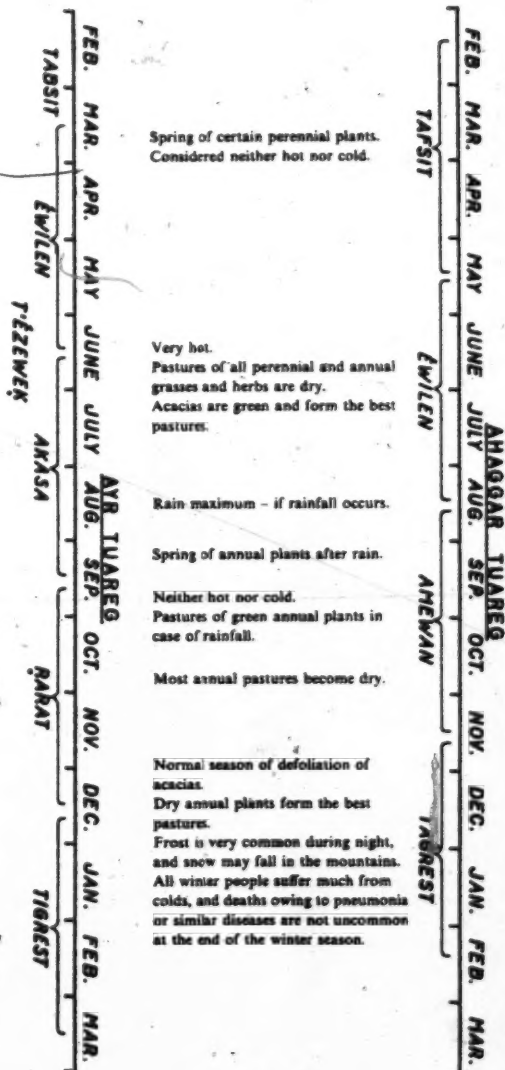
Beginning of the rains.
Afagag (*Acacia Raddiana*) and *afezza* (*Panicum turgidum*) begin to germinate.

Proper rainy season.
Spring of annual plants.
Temperature decreases owing to the rains.
Water abundant in ponds.
Dew (*rahe*) is heavy.
People suffer from malaria.

Rainfall decreases.
Most annual plants are drying and ponds go dry.
Increase of temperature and very hot winds (*agzib*) in daytime, while nights are cool.
The fruit-pods of *afagag* (*Acacia Raddiana*) fall to the ground.

Cool season begins.
Frost may occur during night while snow is said never to fall.
Acacias are green and form good pasture together with dry annual plants. A few annual species - notably *olnat* (*Schouwia purpurea* ssp. *Schimperii*) remain green throughout winter.

Vegetation



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Independent Agriculturists in Ahaggar

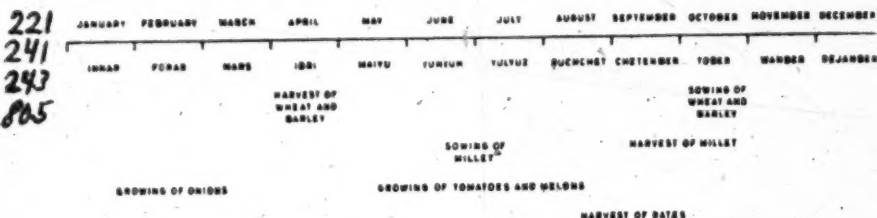


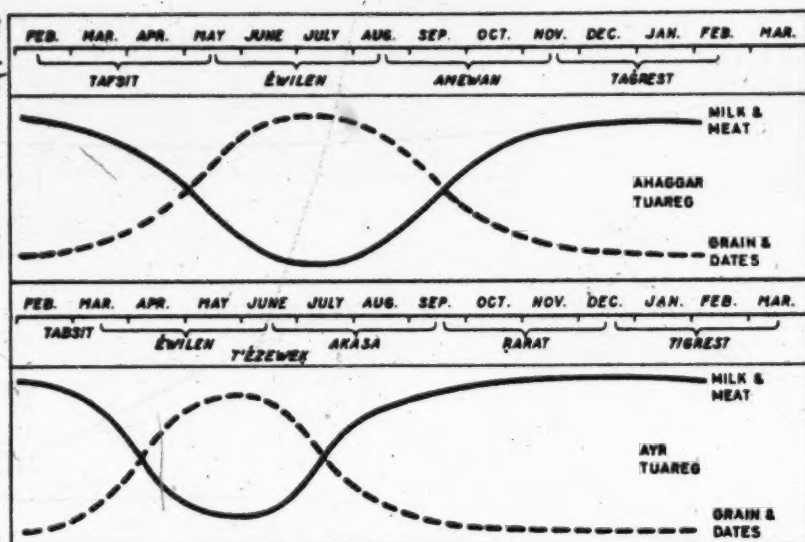
Fig. 139. Horticultural calendar from Ahaggar.

The Tuareg and the negroid agriculturists have a lunar calendar of twelve months corresponding to the Arab calendar, but a lunar calendar has no practical value for the indication of seasonal agricultural activities. The Julian Calendar is known to some people of Ahaggar as well as to other Berbers of the Sahara and the Atlas. Tuareg names of Julian months are given above. Very few people in Ahaggar know the exact beginning and the end of the twelve Julian months, but a few names are used as seasonal terms: *immar* "midwinter", *mars* = "beginning of spring", *ibbi* "early harvest" (of wheat and barley), *maiyyu* "beginning of summer", *tuber* = "late harvest" (millet).

241 which no definite figures can be given, while the yield of fruit trees growing in the garden plot does
423 not necessarily belong to the agriculturist. These trees frequently belong to pastoral Tuareg.

433 I think it can be estimated that an agricultural household with its own garden produce about a
262 thousand kilos of vegetables food products annually for its private use. We can add that though the members of an agricultural household live mainly on vegetable food products they also acquire a certain amount of food from livestock, which normally comprises a few goats and sheep, and perhaps one or two zebras. Conditions of stock-breeding are not always favourable to people who live continuously on the same spot, but it is advantageous to the agriculturists of Ahaggar, who live close to valleys with some pasture, that they are able to feed their animals on green garden products when pasture is badly developed and thus avoid the disaster of a drought. It is also an advantage to most agriculturists that they do not have to water their animals which can drink freely from the irrigation canals. The agriculturists can kill a few goats or sheep annually, they obtain milk and a little butter to be used mainly as a sauce for bread and porridge, and they make cheese of the *awles* type (cf. p. 224), but they never make cheese from fresh milk as do many pastoral Tuareg when milk is abundant. The agriculturists also breed fowls and pigeons, and some of them have an important meat supply from hunting with steel-traps (hares, jackals, fennecs, and ravens). Collecting, on the other hand, is of little or no value to irrigation farmers of Ahaggar.

241 The economic position of agriculturists who work without any particular obligations towards
466 pastoral Tuareg is tolerably good. It is less favourable to those who grow winter crops also on behalf
423 of the Tuareg, as do most cultivators. Some of them irrigate the garden plot with water raised from
511 wells by oxen which may belong to the cultivator or to the Tuareg. But most agriculturists who work
241 for the pastoral Tuareg irrigate by means of *foggara*. It is very strenuous work to dig a *foggara* canal.
312 and co-operation is needed not only for this but also for the maintenance of the whole irrigation system.
466 The gardens are individually tended by the agriculturists, who co-operate in the *foggara* work under
476 the leadership of a headman known as *amfar n efeli*, that is "chief of the *foggara*". This headman is



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Fig. 151. The relative importance throughout the year of food derived from stock-breeding and vegetable products mainly comprising agricultural products. The curves describe conditions in good years for wealthy families. However, milk (and meat) is less important to most Ayr families than indicated in the diagram which covers a household making use of the particular type of annual pasture which remains green throughout winter, notably *alwat* (*Schouwia purpurea* sp. Schimper) *adryal* (*Astragalus Vogeli*), and *tagellet* (*Colocynthis vulgaris*). - This diagram should be compared with Fig. 14 where climatic and botanical changes throughout the year are outlined.

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it is remunerative to buy an extra supply of millet in Damergu and to exchange it for dates and salt at Bilma. Caravan trading is a source of profit to the Ayr Tuareg, but most of them ultimately acquire their agricultural food products in exchange for stock and stock-breeding products. Very few of them mine salt at Amadror, and most of them obtain salt in return for millet bought for domestic animals in Damergu, or for meat of domestic animals butchered in Ayr. The Tuareg cannot easily subsist without agricultural products but they can obtain them in exchange for their livestock.

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We see again that conditions of stock-breeding are very favourable in Ayr in comparison with those of Ahaggar and in Tasile-n-Ajjer, where frequent drought periods make it difficult for the Tuareg to exist. It is easily understandable that the favourable grazing conditions of Ayr have caused many Tuareg of the north to migrate southwards. These migrations take place even to-day and have gone on for centuries (cf. p. 411 ff.). However, even in Ayr it is most difficult to subsist without cultivated cereals (millet), and we must do away with the myth that pastoralists of North Africa live entirely on milk and meat from their animals - they do not. This is true for all Tuareg I have visited, including

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Tuareg Time Reckoning

Tuareg time reckoning is mainly based upon the position of the celestial bodies in relation to the earth. Some Tuareg know the twelve months of the Julian Calendar, but most of them are only aware of a few of these names, some of which have acquired the meaning of definite agricultural activities (cf. Fig. 139). When the Tuareg divide the year into twelve months they normally use the system of the Islamic lunar calendar. The names of the twelve lunar months in the northern dialect are the following:— *azum* (Ar. *ramdan*), *tésésé* (Ar. *fefer*), *gir muhden* (Ar. *du elqada*), *tafaské* (Ar. *du elhajja*), *tamessedek* (Ar. *qchura*), *tallit se(f)fer* (Ar. *sefer*), *tallit erefet* (Ar. *rebiq awl*), *awhim wa yezzen* (Ar. *rebiq tani*), *awhim wa ilkemen* (Ar. *jumad awl*), *sarat* (Ar. *jumad tani*), *ti n tneslemin* (Ar. *reheb*), *émezzihel* (Ar. *chaban*) (cf. Foucauld 1951-52, III, p. 982 ff.). These names, known to all Tuareg, would appear to indicate that the lunar calendar among the Tuareg was introduced before Islam. The division of the week into seven days was apparently introduced with Islam for their names are clearly derived from Arabic. They seem to be known to all Tuareg, but play no important part in practical time reckoning. To indicate events that will take place within a few days the Tuareg will say to-morrow, the day after to-morrow, in three days, and so on.

The lunar calendar plays a certain rôle to the Tuareg as it fixes all important religious feasts, and among the *Kel Ferwan* Tuareg it is normal for the members of a camp to count the succession of lunar years which are named after the place where the camp was situated during the religious feast of *tafaské*. Accordingly there is no definite system of year reckoning common to all Ayr Tuareg, who do not know the Islamic numbers of the years A. H. However, the *Kel Ferwan* Tuareg will sometimes talk about *awétay wa-n-Kawchen*, that is "the year when the Ayr Tuareg revolted against the French under the leadership of Kawchen" (1917) and *awétay wa-n-étran*, that is "the year when shooting stars were extraordinarily abundant" (perhaps about 25 years ago).

To the Ahaggar Tuareg the word *awétay* is used in two different ways. It may be used for a lunar year, but it is most frequently used in the sense of "a period between two midwinters", so that the year among the Northern Tuareg is normally to be understood as "a solar year the exact beginning and end of which cannot be stated". Among the Ahaggar Tuareg each such year has its proper name given after the most important event within the year, e.g., the death or the election of an *Amenukul*, the occurrence of good pasture of a particular annual plant, the year of famine, etc. For years of pre-European times the occurrence of raids and warfare also serve as names of years. It may happen that two tribes do not use the same name for a year, but there is a remarkable tendency towards a uniform calendar system for all Ahaggar. The chronology of years is not known equally well by all

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- 805 Tuareg. Some people are able to reckon only five or ten years back in time, but there are also Tuareg who can count many years back so that they can determine the exact age of most members of their household. The chronology of Ahaggar years has been studied by Foucauld, who gives the names from 1860 to 1906, and a remarkable study has been published by Dubief (cf. Foucauld 1951-52, III, p. 1538 ff.; Dubief 1942). In later studies on the chronology of the years among the Tuareg of Tasilé-n-Ajjer, Dubief has shown that there is no uniform calendar for the *Kel Ajjer*. The *Uragen*, the *Imanrasaten*, and the *Iforas* have their particular chronologies (cf. Dubief 1948, 1950, 1956). In addition to these chronologies for larger groups of Tuareg comprising several tribes, there are also special chronologies for individual tribes referring to events within these units.

To indicate future events the Tuareg may use the lunar calendar and refer to a particular day (night) of a particular month. They normally count in nights but to indicate the length of a journey they will frequently count in days. The sub-divisions of the day among the Tuareg of Ahaggar and Ayr are mentioned in the list below:—

- (1) The early morning before sunrise, when one begins to see but does not see very clearly. It is a very short period known in Ahaggar as *ahokhak*, in Ayr as *dengelwak*.
- (2) The period from sunrise until 1½-2 hours later during which the sun is low and the heat not very trying. This is known in Ahaggar as *agedelsit semmidet*, in Ayr as *afora*.
- (3) The period when the sun is getting high in the heavens. People will now avoid the sun and rest in the shade. The name of this period, which corresponds to late morning or forenoon, is in Ahaggar *agedelsit tekkuset*, in Ayr *agedelchit*.
- (4) The period when the sun is very high. It comprises a certain period before and after midday, and is known as *turut* (Ahaggar) and *terut* (Ayr).
- (5) The early afternoon which begins around two o'clock. It is called *tazerrahat* in Ahaggar, *tézzar* in Ayr.
- (6) The late afternoon from about four o'clock until sunset is known as *azellenaz* in Ahaggar and as *takkes* in Ayr.
- (7) The period of dusk which is known as *almez* and *alméz*, respectively.

For the night the divisions are few and less clear, and it seems as if they are based mainly upon normal activities such as eating time, bed time, and the time of the early morning when it is considered preferable to set out upon a journey.